## STATE OF WISCONSIN

### SENATE CHAIR Howard Marklein

316 East, State Capitol P.O. Box 7882 Madison, WI 53707-7882 Phone: (608) 266-0703



# ASSEMBLY CHAIR Mark Born

308 East, State Capitol P.O. Box 8952 Madison, WI 53708-8953 Phone: (608) 266-2540

### JOINT COMMITTEE ON FINANCE

### **MEMORANDUM**

To:

Members

Joint Committee on Finance

From:

Senator Howard Marklein

Representative Mark Born

Date:

November 12, 2021

Re:

SWIB Report to JFC

Attached is a report on all costs and expenses charged to the trust funds under management during the prior quarter as well as the number of full-time equivalent positions created or abolished during the quarter from the State of Wisconsin Investment Board, pursuant to s. 25.17(13m), Stats.

This report is being provided for your information only. No action by the Committee is required. Please feel free to contact us if you have any questions.

**Attachments** 

HM:MB:jm



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November 12, 2021

Senator Howard Marklein, Co-Chair Joint Committee on Finance P.O. Box 7882 Madison WI 53707-7882

Senator Robert Cowles, Co-Chair Joint Legislative Audit Committee P.O. Box 7882 Madison WI 53707-7882

Secretary Joel Brennan
Department of Administration
101 East Wilson Street
P.O. Box 7864
Madison. WI 53707-7864

Representative Mark Born, Co-Chair Joint Committee on Finance P.O. Box 8952 Madison WI 53708-8952

Representative Samantha Kerkman, Co-Chair Joint Legislative Audit Committee P.O. Box 8952 Madison WI 53708-8952

Dear Senator Marklein, Senator Cowles, Representative Born, Representative Kerkman, and Secretary Brennan:

State statutes require the State of Wisconsin Investment Board (SWIB) to report all costs and expenses charged to the trust funds under management during the prior quarter as well as the number of full-time equivalent positions created or abolished during the quarter<sup>1</sup>. The information contained in this report is for the quarter ended September 30, 2021.

							*****	T	railing 4 Qtr	
Total Cost of Management Summary		4Q2020		1Q2021	2Q2021		3Q2021		Total	% of Total
Internal Operating Expenses										
Operating Budget Expenses	\$	12,809,354	\$	11,960,506	\$ 39,468,133	\$	12,882,486	\$	77,120,479	60.9%
Custodial, Investment Operations & Banking		1,945,599		1,597,860	1,667,094		1,712,812		6,923,365	5.5%
Legal		916,718		412,361	237,486		642,792		2,209,357	1.7%
Investment Research & Consulting		8,861,556		8,716,569	 9,505,930		10,099,210		37,183,265	29.4%
Total Internal Operating Expenses	\$	24,533,227	\$	22,687,296	\$ 50,878,643	\$	25,337,300	\$	123,436,466	97.5%
Securities Lending Agent Expenses		633,569		906,556	884,053		706,762		3,130,940	2.5%
Total SWIB Operating Costs	5	25,166,796	5	23,593,852	\$ 51,762,696	\$	26,044,062	\$	126,567,406	100.0%
External Investment Management Fees										
Externally Managed Separate Account Fees										
Beta One & Other - Separately Maπaged	\$	10,014,059	\$	11,815,893	\$ 12,846,225	\$	15,897,862	\$	50,574,039	8.5%
Supplemental Information - External Fund Fe-	es									
Real Estate	\$	14,508,274	\$	16,246,132	\$ 16,794,113	\$	17,175,742	\$	64,724,261	10.8%
Private Equity & Venture Capital		53,017,487		42,901,170	57,849,368		56,476,982		210,245,007	35.2%
Hedge Funds		80,920,383		60,313,126	43,171,220		46,910,532		231,315,261	38.7%
Beta One & Other - External Funds		2,465,978		3,971,887	15,468,903		18,697,235		40,604,003	6.8%
Total External Investment Management Fee	\$	160,926,181	\$	135,248,208	\$ 146,129,829	\$	155,158,353	\$	597,462,571	100.0%
Total Cost of Management	\$	186,092,977	\$	158,842,060	\$ 197,892,525	3	181,202,415	\$	724,029,977	

For definitions of the expense categories presented above, please refer to Attachment C.

<sup>1</sup>Wisconsin Statutes Section 25.17 (13m): All investment-related costs and expenses charged to the WRS Trust Funds, State Investment Fund, State Life Insurance Fund, Historical Society Endowment Fund, Injured Patients and Families Compensation Fund and UW Trust Fund. Investment transaction expenses, such as trading commissions and interest expense, are included in investment returns, and therefore not included in this report.

SWIB Operating Costs are charged to the trust funds under management and externally managed fund fees are netted against the investment returns generated by SWIB's external fund holdings. It is important to consider costs in the context of value-added investment returns. For example, during the five years ended December 31, 2020, after consideration of all expenses, costs, and fees, SWIB generated \$1.91 billion in additional profits beyond what would have been generated by the benchmark portfolio SWIB is measured against. These profits all go directly into the Wisconsin Retirement System for the benefit of its beneficiaries.

Attachment A provides a breakdown of the amount and percentage of assets managed under each type of dedicated and commingled account or partnership, and the change in the amount and percentage from the prior calendar quarter. SWIB's total authorized positions are 261 as shown in the table below.

Assets Under Man	agement & Posit	ions
	6/30/2021	9/30/2021
Internal Management	55.5%	55.0%
External Management	44.5%	45.0%
Total SWIB Positions	261	261

In addition, Attachment B provides details of the services provided to SWIB and their associated quarterly costs.

As new investment strategies are implemented and markets continue to evolve, SWIB will continue evaluating the most efficient means to manage the trust fund assets. Please contact us if you have any questions or comments about this report.

Sincerely,

Edwin Denson

Executive Director/Chief Investment Officer

Attachments

cc: Members, Joint Committee on Finance

Edwin Denson

Members, Joint Committee on Audit Robert Lang, Legislative Fiscal Bureau Joe Chrisman, Legislative Audit Bureau

# **Total Assets Under Management**

Wisconsin Retirement System (WRS)	12/31/2020	020	3/31/2021	021	6/30/2021	021	9/30/2021	021
	Amount		Amount		Amount		Amount	
	(in millions)	Percent	(in millions) Percent	Percent	(in millions)	Percent	(in millions)	Percent
Internally Managed	\$65,735	50.7%	\$68,456	51.6%	\$72,061	51.4%	\$72,136	51.2%
Externally Managed Dedicated Accounts	37,393	28.8%	35,943	27.1%	36,723	26.2%	35,978	25.5%
Externally Managed Commingled Accounts	26,617	20.5%	28,164	21.2%	31,351	22.4%	32,809	23.3%
1 Passive Index Funds	2.730	2.1%	2,864	2.2%	2,966	2.1%	2,894	2.1%
2. Limited Partnerships	16,724	12.9%	17,894	13.5%	19,692	14.1%	22,128	15.7%
3. Actively Managed Commingled Accounts	7.163	5.5%	7,406	2.6%	8,693	6.2%	7,787	5.5%
TOTAL WRS Assets	\$129,745	100.0%	\$132,563	100.0%	\$140,136	100.0%	\$140,923	100.0%

State Investment Fund - Internally Managed	\$11,861	\$13,988	\$15,426	\$14,648	
Aanaged Funds - Internal	\$129	\$119	\$124	\$123	
Separately Managed Funds - External	\$2,174	\$2,148	\$2,221	\$2,225	

Total Assets Inder Management	\$143.909		\$148,819		\$157,906		\$157,919	
Total Internal Management	\$77.725	54.0%	\$82,564	55.5%	\$87,611	55.5%	\$86,906	55.0%
Total External Management	\$66,184	46.0%	\$66,255	44.5%	\$70,295	44.5%	\$71,012	45.0%

### STATE OF WISCONSIN INVESTMENT BOARD Expenses for All Funds Under Management Quarter Ending September 30, 2021

EXPENSE CATEGORY <sup>1</sup>	SERVICE PROVIDED	E	XPENSES
	OZINISZ I NOVIDZ		
Internal Operating Expenses Staff Compensation	Staff Compensation	\$	9,349,519
Fringe Benefits	Fringe Benefits		2,108,678 1,424,289
Equipment, Supplies & Services Total Internal Operating Expenses	General Supplies & Services	\$	12,882,486
Custodial, investment Operations and Banking Fees BNY Mellon Asset Servicing - Custody	Master Custody Services	\$	285,318
BNY Mellon Asset Servicing - Castody  BNY Mellon Asset Servicing - Investment Operations	Investment Operating Services	*	1,427,414
US Bank	Banking Fees	-\$	80 1,712,812
Total Custodial, Investment Operations and Banking Fees		•	1,712,012
Legal Fees		ė	CE 000
Chapman & Cutler LLP Cox Castle & Nicholson LLP	Legal Work for Investment Strategies Legal Work for Investment Strategies	\$	65,880 67,935
DLA Piper LLP (US)	Legal Work for Investment Strategies		168,799
Godfrey & Kahn SC	Legal Work for Investment Strategies		10,712 100,000
Latham & Watkins LLP Purrington Moody Weill LLP	Legal Work for Investment Strategies Legal Work for Investment Strategies		20,560
Quarles & Brady	Legal Work for Investment Strategies		167,493
Reinhart Boerner Van Deuren SC	Legal Work for Investment Strategies		153 41,260
Shearman & Sterling LLP Total Legal Fees	Legal Work for Investment Strategies	\$	642,792
-			
Investment Counsel ABG Sundal Collier Inc	Investment Research	\$	750
Adeptyx Consulting	Investment Consulting Services	•	128,901
Aksia LLC	Hedge Fund Investment Consulting		193,750
Alembic Global Advisors Alex Solutions	Market Research Research & Data Service		2,400 38,750
Arb Journal	Regulatory Research & Analysis		22,000
8 Riley FBR Inc	Investment Research		6,000 136,900
Bank of America Merrill Lynch BCA Research Inc	Investment Research Global & Domestic Fixed Income Strategy Research		44,167
Berenberg	Investment Research		94,216
BITA Risk Limited	Risk Oversight Service		45,000 75,000
Blackrock Financial Management Inc Bloomberg Finance LP	Risk Services Market, Company, Industry & Benchmark Information		1,017,114
BMO Capital Markets Corp	Investment Research Services		22,000
BNY Mellon Asset Servicing - Eagle/Pace	Investment Consulting Services		150,530 3,150
Boenning & Scattergood Inc BTIG, LLC	Investment Research Investment Research		1,800
Canaccord Genuity	Investment Research		8,500
Capital Economics LTD	Market Research		56,611 500
Carnegie Inc CBOE Global Markets, Inc.	Investment Research Research and Data Services		1,500
CFRA Research	Investment Research Services		23,100
Charles River System Inc	Portfolio Management Trading Software & Services Investment Research		346,475 8,500
CIBC World Markets Inc CL King & Associates	Investment Research		5,600
Codrington Japan	Investment Research		500
Colliers Securities LLC	Investment Research Investment Research		9,000 1,000
Compass Point Research & Trading, LLC Cornerstone Macro LLC	Macro Economic Research		29,050
CoStar Portfolio Strategy	Real Estate Consulting & Research Services		28,738
Cowen and Company LLC	Investment Research Investment Research		41,400 5,700
Craig-Hallum Capital Group Crane Data LLC	Research and Data Services		3,000
CreditSights	Credit Assessments		17,500
Cross Current Research LLC DA Davidson & Co	Healthcare Sector Research Investment Research		10,000 18,500
Dacheng Xiu	Investment Research		37,500
Daiwa Capital Markets America	Investment Research		34,400
Davy Securities Limited Deutsche Bank	Investment Research Tax registration fees		11,750 71,300
DNB Bank ASA	Investment Research		1,000
DTCC - EPN	Trade Settlement Service		3,000 772
DTCC ITP LLC	Trade Settlement Service Private Markets Portfolio Management Services		225,473
EFront Financial Solutions Inc Elevation LLC	Research and Data		20,000
Empirical Research Partners LLC	Investment Research		77,450 12,510
Ernst & Young LLP Euromonitor International	Tax Compliance Services & Investment Consulting Research and Data Services		18,915
Evercore Group LLC	Investment Research		63,800
•			

### STATE OF WISCONSIN INVESTMENT BOARD Expenses for All Funds Under Management Quarter Ending September 30, 2021

EXPENSE CATEGORY <sup>1</sup>	SERVICE PROVIDED	EXPENSES
Exane Inc	Investment Research	79,300
FactSet Research Systems Inc	Financial & Economic Database	983,410
Fairleads Strategies	Research & Data Service	1,875
FBN Securities, Inc.	Investment Research	11,500
FIS Data Systems Inc.	Research and Data Services	39,000 42,500
Fitch Solutions Inc Furey Research Partners LLC	Credit Rating Services Small Cap Research	14,000
Future of the Money Management Industry	Research and Data Services	30,000
Gabriel Roeder Smith & Company	Actuarial Consulting	61,500
Gartner Inc	Technology Sector Research	28,715
Goodbody	Investment Research	5,750
Grandview Analytics LLC	Investment Information Technology Consulting Services	92,984 16,937
Green Street Advisor	Real Estate Analytics Investment Research	11,900
Guggenheim Securities LLC	Investment Research	6,000
Handelsbanken Markets Securities Inc. Haver Analytics	Global Macroeconomic Research	22,700
Healthy Markets Association	Research & Data Service	12,500
HSBC Securities (USA) Inc.	Investment Research	3,500
Ice Data LP	Fixed Income Indices	20,097
IHS Markit KY3P LLC	Risk Management Service	10,000
In Focus Information LLC	Private Placement Investment Research	1,400 30,000
InsiderScore LLC	Investment Research & Analytics	19,500
Institutional Investor	Investment Data and Research Services Proxy Voting Analysis	41,914
Institutional Shareholder Services Inc Investec Securities (US) LLC	Investment Research	2,500
Janney Montgomery Scott	Investment Research	1,100
Jefferies Research Services LLC	Investment Research	66,525
Keefe Bruyette & Woods (KBW)	Investment Research	44,500
Kepler Capital Markets Inc	Investment Research Services	16,100
KeyBanc Capital Markets Inc	investment Research	22,250
Keystone Consulting Inc	Investment Information Technology Consulting Services	253,840 223,100
Kreischer Miller LLP	Investment Consulting Investment Research	26,550
Liberum Capital Inc Longbow Securities LLC	Investment Research	1,000
Loop Capital Markets LLC	Investment Research	7,500
Mackey LLC	Research Management System	58,463
Macquarie Capital (USA) Inc	Investment Research	23,100
Markit-EDM Limited	Investment Consulting	200,174
Matrix IDM, LLC	Investment Consulting	82,600
McLagan Partners Inc	Investment Compensation Data and Analysis	90,000 65,548
Meketa Investment Group	Public Markets External Manager Consultant Investment Research Services	14,000
MKM Partners Moodys Analytics	Economic, Currency & Bond Analysis	35,198
Moningstar Inc	Industrial Sector Market Research & Analysis	9,000
MSCI Inc - Risk Metrics Solutions	Research and Data Services	413,018
MUFG Securities America	Investment Research	27,900
National Bank Financial Inc	Investment Research	7,000
Needham & Company LLC	Investment Research	10,000 5,000
Nephron Research LLC	Investment Research Investment Research	25,000
New Street Research LLC	Investment Research	500
Noble Capital Markets Inc Northland Securities	Investment Research	3,700
Novus Partners Inc	Profit & Loss Analytics System	47,025
Nuware Technology Corp	Investment Information Technology Consulting Services	235,008
NYSE Market Inc	New York Stock Exchange Data	7,617
Odeon Capital Group, LLC	Research and Data Services	7,500
Oliver James	Investment Consulting Investment Research	137,991 11,000
Oppenheimer & Co Inc	Investment Data Service	500
OptionMetrics Options Price Reporting Authority	Quote System for Options Market	2,678
Pac-invest	Research and Data Services	12,156
Phil Erlanger Research Co Inc	Investment Research	2,000
Piper Sandler & Co	Investment Research	39,700
PremiaLab	Investment Research	12,451
RCM Technologies	Investment Consulting	39,000
Redburn Europe Limited	Investment Research	33,800 72,759
Refinitiv	Research Pricing (Autex, Baseline, FirstCall) Macro Economic Research	34,350
Renaissance Macro Research	Investment Research	15,000
Research Alliance Robert W. Baird & Co.	Investment Research	51,500
Rosenblatt Securities Inc	Investment Research	12,800
Roth Capital Partners	Investment Research	5,000
Russell Investment Group	Index Data	8,932
Rystad Energy AS	Investment Research	15,000

### STATE OF WISCONSIN INVESTMENT BOARD Expenses for All Funds Under Management Quarter Ending September 30, 2021

Santander Investment Resourthies LtC   Research and Data Services   10,070   SEB Securities In   Investment Research   1,000   Investment Information   1echnology Consulting Services   1,000   Investment Research   1,000   Sidod & Company LtC   Investment Research   1,000	EXPENSE CATEGORY	SERVICE PROVIDED	EX	(PENSES
Sandrad   Demstern & Coll LC	S&P Global Market Intelligence	Industry & Corporate Research		114,800
Seaport Global Securities LLC   Research and Data Services	Sanford C Bernstein & Co LLC	Investment Research		181,338
Investment Research   1,000	Santander Investment Securities Inc	Investment Research		16,000
Investment Information   Technology Consulting Services   \$2,006	Seaport Global Securities LLC	Research and Data Services		
Sedot & Company LLC   Investment Research   1,263,536   1,263,53	SEB Securities Inc	Investment Research		
Investment System   1,283,1356   Simcorp USA, Inc.   Investment Research   1,283,1356   Simcorp & Simmons & Simmon	Sharp Decisions Inc	Investment Information Technology Consulting Services		
Investment System   1,263,536   Simmons   Si	Sidoti & Company LLC	Investment Research		
Simmons & Simm		Investment System		
Specified   Spec		Global Regulatory Services		
Solve Advisors inc	SMBC Nikko Securities America, Inc.	Investment Research		
Standards Board for Alternative Investments Limited   Investment Membership   18,400	Snowflake Inc	Research and Data Services		
18,400	Solve Advisors Inc	Investment Research		
Private Equity Consulting Services   239,587	Standards Board for Alternative Investments Limited	Investment Membership		
StepStone Group   StepStone Group Real Estate   Real Estate Consulting Services   556,471	Stephens Inc	Investment Research		
Step Stone Group Real Estate   Seaf Estate Consulting Services   56,471				
Stife   Nicolaius & Company Incorporated   Investment Research   38,900   SUBLET Frankel & Co., Inc   Investment Research and Data Services   4,000   SUBLET FOR   Research and Data Services   793		Real Estate Consulting Services		
SVB   Leirlink   Research and Data Services   4,000				
SVB Leerink   Research and Data Services   4,000	Stuart Frankel & Co., Inc	Investment Research		5,000
SystemsAccountants Investment Information Technology Consulting Services 63,200 Taranis, Inc. Investment Information Technology Consulting Services 63,200 To Securities (USA) LLC Investment Research 4,500 Tolsey Advisory Group Consumer Sector Research 31,250 The Benchmark Company LLC Investment Research 4,500 The Leuthhold Group LLC Broad Based Market Research 12,500 The Leuthhold Group LLC Broad Based Market Research 12,500 The Leuthhold Group LLC Broad Based Market Research 4,500 Toronto Stock Exchange Market Data 12,812 TradeWeb Investment Research 4,500 Truist Securities, Inc. Investment Research 5,500 Truist Securities, Inc. Investment Research 1,500 Truist Securities, Inc. Investment Research 2,500 Truist Securities, Inc. Investment Research 2,500 Truist Securities, Inc. Investment Research 3,500 Truist Securities, Inc. Investment Research 3,500 Truist Securities Securities, Inc. Investment Research 1,500 Truist Securities Securities, Inc. Investment Research 1,500 Truist Securities Securities, Inc. Investment Research Services 1,500 Truist Securities Sec		Research and Data Services		4,000
SystemsAccountants         Investment Information Technology Consulting Services         81,920           Taranis, Inc.         Investment Information Technology Consulting Services         63,220           To Securities (USA) LLC         Investment Research         4,500           Telsey Advisory Group         Consumer Sector Research         4,500           The Benchmark Company LLC         Investment Research         4,500           The Leuthold Group LLC         Broad Based Market Research         12,500           The Nasdag Stock Market, LLC         Research & Data Services         4,550           Toronto Stock Exchange         Market Data         12,812           TradeWeb         On-Line Fixed Income Trading Services         9,534           Trivariate Research LP         Investment Research         5,000           Truist Securities, Inc.         Investment Research         13,900           Tudor Pickering Holf & Co         Investment Research         13,190           Unid Business Software Inc         Financial & Administration Services System         56,746           Urban Land Institute         Investment Research         813           Urban Land Institute         Investment Research         813           Vertus Advisory Inc         Benchmarking Consulting Services         42,000	SWIFT SC	Research and Data Services		793
Taranis, Inc.   Investment Information Technology Consulting Services   63,200     Dascurities (USA) LLC   Investment Research   4,500     Telsey Advisory Group   Consumer Sector Research   31,250     The Benchmark Company LLC   Investment Research   4,000     The Leuthold Group LLC   Broad Based Market Research   12,500     The Nasdaq Stock Market, LLC   Research & Data Services   4,500     Toronto Stock Exchange   Market Data   12,812     TradeWab   On-Line Fixed Income Trading Services   9,534     Trivariate Research LP   Investment Research   13,900     Trudist Securities, Inc.   Investment Research   13,900     Tudor Pickering Holfs Co   Investment Research   13,900     Tudor Pickering Holfs Co   Investment Research   13,100     Unit4 Business Software Inc   Investment Research   13,360     Unit4 Business Software Inc   Investment Consulting Services   13,350     Uritary Pickering Holfs Co   Investment Research   13,350     Uritary Pickering Holfs Co   Investment Research   13,350     Uritary Pickering Holfs Co   Investment Consulting Services   14,200     Uritary Pickering Holfs Co   Investment Research & Analysis   13,350     Uritary Pickering Holfs Co   Investment Research & Analysis   13,350     Uritary Pickering Holfs Consulting Services   14,200     Uritary Pickering Holfs Consulting Services   14,200     Uritary Pickering Holfs Consulting Services   14,200     Uritary Pickering Holfs Consulting Services   14,000     Uritary Pickering Holfs Consulting Services   14,200     Uritary Pickering Holfs Company LLC   Investment Research Services   14,200     Uritary Pickering Holfs Company LLC   Investment Consulting   14,		Investment Information Technology Consulting Services		81,920
TD Securities (USA) LLC	•	Investment Information Technology Consulting Services		63,200
Telsey Advisory Group		Investment Research		4,500
The Benchmark Company LLC   Investment Research   4,000   12,500   The Leuthold Group LLC   Broad Based Market Research   12,500   The Nasdag Stock Market, LLC   Research & Data Services   4,500   Toronto Stock Exchange   Market Data   12,812   TradeWeb   On-Line Fixed Income Trading Services   9,534   Trivariate Research LP   Investment Research   Investment Research   13,900   Truist Securities, inc.   Investment Research   Investment Research   13,100   Investment Research   13,100   Univestment Research   13,350   Univestment Research   13,350   Univestment Research   13,350   Univestment Research   14,000   Univestment Rese		Consumer Sector Research		31,250
The Leuthold Group LLC         Broad Based Market Research         12,500           The Nasdaq Stock Market, LLC         Research & Data Services         4,500           Toronto Stock Exchange         Market Data         12,812           TradeWeb         On-Line Fixed Income Trading Services         9,534           Trivariate Research LP         Investment Research         13,900           Tudor Pickering Holt & Co         Investment Research         13,900           United Susiness Software Inc         Financial & Administration Services System         56,746           Urban Land Institute         Investment Research Consulting Services         813           Vertus Advisory Inc         Benchmarking Consulting Services         42,000           Visible Alpha LLC         Research and Data Services         36,619           V-Soft Consulting Group Inc         Investment Information Technology Consulting Services         76,800           Wells Fargo Securities, LLC         Investment Research & Information         12           Wells Fargo Securities, LLC         Investment Research Services         42,700           Wolfe Trahan         Transportation and Macro Economic Research         9,500           Wolfer Trahan         Transportation and Macro Economic Research         10,000           Wolfer Trahan         Transportation and Macro E	The Benchmark Company LLC	Investment Research		4,000
The Nasdaq Stock Market, LLC         Research & Data Services         4,500           Toronto Stock Exchange         Market Data         12,812           TradeWeb         On-Line Fixed Income Trading Services         9,534           Trivariate Research LP         Investment Research         5,000           Tudist Securities, Inc.         Investment Research         13,900           Tudor Pickering Holt & Co         Investment Research         13,100           Unital Business Software Inc         Financial & Administration Services System         56,746           Urban Land Institute         Investment Consulting Services         813           Vertus Advisory Inc         Benchmarking Consulting Services         42,000           Visible Alpha LLC         Research and Data Services         36,619           V-Soft Consulting Group Inc         Investment Information Technology Consulting Services         76,800           Well Street Journal         Investment Research & Information         12           Wedbush         Investment Research Services         42,700           Wells Fargo Securities, LLC         Investment Research Services         42,700           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolfe Trahan         Tradinger Patriers Inc         10,000		Broad Based Market Research		12,500
Toronto Stock Exchange		Research & Data Services		4,500
TradeWeb         On-Line Fixed Income Trading Services         9,534           Trivariate Research LP         Investment Research         5,000           Tudor Pickering Holt & Co         Investment Research         13,900           Tudor Pickering Holt & Co         Investment Research         13,100           Unit B usiness Software Inc         Financial & Administration Services System         56,746           Unit B usiness Software Inc         Investment Consulting Services         813           Vertual Research Partners         Industrial Sector Market Research & Analysis         13,350           Vertus Advisory Inc         Benchmarking Consulting Services         42,000           Versus Advisory Inc         Research and Data Services         36,619           V-Soft Consulting Group Inc         Investment Information Technology Consulting Services         76,800           Wall Street Journal         Investment Research & Information         12           Wedbush         Investment Research & Information         12           Wells Fargo Securities, LLC         Investment Research Services         42,700           Welliam Blair & Company LLC         Investment Research Services         9,500           Wolfe Traban         Transportation and Macro Economic Research         80,300           Wolfe Traban         Research and Data Ser		Market Data		12,812
Trivariate Research LP         Investment Research         5,000           Truist Securities, Inc.         Investment Research         13,900           Unit4 Business Software Inc         Investment Research         13,100           Unit4 Business Software Inc         Financial & Administration Services System         56,746           Urban Land Institute         Investment Consulting Services System         56,746           Vertical Research Partners         Industrial Sector Market Research & Analysis         13,350           Verus Advisory Inc         Benchmarking Consulting Services         42,000           Visible Alpha LLC         Research and Data Services         36,619           V-Soft Consulting Group Inc         Investment Information Technology Consulting Services         76,800           Wall Street Journal         Investment Research & Information         12           Wedbush         Investment Research & Information         12           Wells Fargo Securities, LLC         Investment Research Services         42,700           Wells Fargo Securities, LLC         Investment Research Services         42,700           Wolfe Trahan         Transportation and Macro Economic Research         80,300           World Bridge Partners Inc         Recruitment Consulting         32,500           World Bridge Partners Inc         Res		On-Line Fixed Income Trading Services		9,534
Truist Securities, Inc.         Investment Research         13,900           Tudor Pickering Holt & Co         Investment Research         13,100           UnitId Business Software Inc         Financial & Administration Services System         56,746           Urban Land Institute         Investment Consulting Services         813           Vertical Research Partners         Industrial Sector Market Research & Analysis         13,350           Verus Advisory Inc         Benchmarking Consulting Services         42,000           Visible Alpha LLC         Research and Data Services         36,619           V-Soft Consulting Group Inc         Investment Information Technology Consulting Services         76,800           Wail Street Journal         Investment Research & Information         12           Wedbush         Investment Research Services         42,700           Wells Fargo Securities, LLC         Investment Research Services         42,700           Wells Fargo Securities, LLC         Investment Research Services         9,500           William Blair & Company LLC         Investment Research Services         80,300           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolfed Trahan         Transportation and Macro Economic Research         80,300           WorldGridge Partners Inc		Investment Research		5,000
Tudor Pickering Holf & Co  Unité Business Software Inc  Urban Land Institute  Urban Land Institute  Vertical Research Partners  Vertical Research Partners  Vertical Research Partners  Vertical Research Partners  Vertical Research & Industrial Sector Market Research & Analysis  Vertical Research Partners  Vertical Research and Data Services  Vertical Group Inc  Visible Alpha LLC  V-Soft Consulting Group Inc  Investment Information Technology Consulting Services  Vertical Research and Data Services  Vertical Research & Information  Investment Research & Information  Vertical Research & Information  Investment Research & Information  Vertical Research & Information  Investment Research  Vertical Research Services  Vertical Research Services  Vertical Research Services  Vertical Research & Information  Investment Research  Vertical Research Services  Vertical Re		Investment Research		13,900
Unit4 Business Software Inc Urban Land Institute Urban Land Institute Investment Consulting Services Vertical Research Partners Verus Advisory Inc Benchmarking Consulting Services Verus Advisory Inc Visible Alpha LLC Research and Data Services Versus Advisory Inc Visible Alpha LLC Research and Data Services Versus Advisory Inc Visible Alpha LLC Research and Data Services Research and Data Services Versus Advisory Inc Visible Alpha LLC Research Resea		Investment Research		13,100
Urban Land Institute investment Consulting Services 813 Vertical Research Partners Industrial Sector Market Research & Analysis 13,350 Verus Advisory Inc Benchmarking Consulting Services 42,000 Visible Alpha LLC Research and Data Services 36,619 V-Soft Consulting Group Inc Investment Information Technology Consulting Services 76,800 Wall Street Journal Investment Research & Information 12 Wedbush Investment Research & Information 12 Wells Fargo Securities, LLC Investment Research Services 42,700 William Blair & Company LLC Investment Research Services 9,500 Wolfe Trahan Transportation and Macro Economic Research 80,300 Wolverine Execution Services LLC Options Trading Platform 9,300 Wolverine Execution Services LLC Research and Data Services 10,000 Total Investment Counsel \$10,000 Total Investment Counsel \$706,762 Total Securities Lending Agent Fees \$706,762 Total Securities Lending Agent Fees		Financial & Administration Services System		56,746
Vertical Research Partners     Industrial Sector Market Research & Analysis     13,350       Verus Advisory Inc     Benchmarking Consulting Services     42,000       Visible Alpha LLC     Research and Data Services     36,619       V-Soft Consulting Group Inc     Investment Information Technology Consulting Services     76,800       Wail Street Journal     Investment Research & Information     12       Wedbush     Investment Research     42,700       Wells Fargo Securities, LLC     Investment Research Services     42,700       William Blair & Company LLC     Investment Research     9,500       Wolfe Trahan     Transportation and Macro Economic Research     80,300       Wolverine Execution Services LLC     Options Trading Platform     1,341       WorldBridge Partners Inc     Recruitment Consulting     32,500       Yipit, LLC     Research and Data Services     10,000       Total Investment Counsel     \$ 10,099,210       Securities Lending Agent Fees     \$ 706,762       BNY Mellon Asset Servicing     Securities Lending Agent Fees     \$ 706,762		Investment Consulting Services		813
Verus Advisory Inc     Benchmarking Consulting Services     42,000       Visible Alpha LLC     Research and Data Services     36,619       V-Soft Consulting Group Inc     Investment Information Technology Consulting Services     76,800       Wall Street Journal     Investment Research & Information     12       Wedbush     Investment Research & Information     12       Wells Fargo Securities, LLC     Investment Research Services     42,700       William Blair & Company LLC     Investment Research Services     42,700       Wolfe Trahan     Transportation and Macro Economic Research     80,300       Wolverine Execution Services LLC     Options Trading Platform     1,341       WorldBridge Partners Inc     Recruitment Consulting     32,500       Yipit, LLC     Research and Data Services     10,000       Total Investment Counsel     \$ 10,099,210       Securities Lending Agent Fees     \$ 706,762       BNY Mellon Asset Servicing     Securities Lending Agent Fees     \$ 706,762       Total Securities Lending Agent Fees     \$ 706,762       *** Total Securities Lending Agent Fees     \$ 706,762		Industrial Sector Market Research & Analysis		13,350
Visible Alpha LLC V-Soft Consulting Group Inc Wall Street Journal Wedbush Wells Fargo Securities, LLC Wells Fargo Securities, LLC Wells Fargo Securities, LLC Wolfe Trahan Wolfe Trahan WorldBridge Partners Inc Yipit, LLC Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees  Research and Data Services Investment Information Technology Consulting Services Investment Research & Information Investment Research Investment Research Services Investment Consulting Investment Research Investment Research Investment Research Inve				42,000
V-Soft Consulting Group Inc  Wall Street Journal  Wedbush  Wells Fargo Securities, LLC  Wolfe Trahan  Wolfe Trahan  Wolfe Trahan  Wolfe Trahan  Wolferine Execution Services LLC  Wolferine Execution Services LLC  Wolferine Execution Services LLC  Options Trading Platform  1,341  WorldBridge Partners Inc  Recrultment Consulting  Research and Data Services  Total Investment Gounsel  Securities Lending Agent Fees  BNY Mellon Asset Servicing  Total Securities Lending Agent Fees  Securities Lending Agent Fees  Securities Lending Agent Fees  Securities Lending Agent Fees  \$ 706,762				36,619
Wail Street Journal         Investment Research & Information         12           Wedbush         Investment Research         14,000           Wells Fargo Securities, LLC         Investment Research Services         42,700           William Blair & Company LLC         Investment Research         9,500           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolverine Execution Services LLC         Options Trading Platform         1,341           WorldBridge Partners Inc         Recruitment Consulting         32,500           Yipit, LLC         Research and Data Services         10,000           Total Investment Counsel         \$ 10,099,210           Securities Lending Agent Fees         Securities Lending Agent Fees         \$ 706,762           Total Securities Lending Agent Fees         \$ 706,762				76,800
Wedbush         Investment Research         14,000           Wells Fargo Securities, LLC         Investment Research Services         42,700           William Blair & Company LLC         Investment Research         9,500           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolverine Execution Services LLC         Options Trading Platform         1,341           WorldBridge Partners Inc         Recruitment Consulting         32,500           Yipit, LLC         Research and Data Services         10,000           Total Investment Counsel         \$ 10,099,210           Securities Lending Agent Fees         \$ 706,762           BNY Mellon Asset Servicing         Securities Lending Agent Fees         \$ 706,762           Total Securities Lending Agent Fees         \$ 706,762		Investment Research & Information		12
Wells Fargo Securities, LLC         Investment Research Services         42,700           William Blair & Company LLC         Investment Research         9,500           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolverine Execution Services LLC         Options Trading Platform         1,341           WorldBridge Partners Inc         Recruitment Consulting         32,500           Yipit, LLC         Research and Data Services         10,000           Total Investment Counsel         \$ 10,099,210           Securities Lending Agent Fees         \$ 706,762           Total Securities Lending Agent Fees         \$ 706,762		Investment Research		14,000
William Blair & Company LLC         Investment Research         9,500           Wolfe Trahan         Transportation and Macro Economic Research         80,300           Wolverine Execution Services LLC         Options Trading Platform         1,341           WorldBridge Partners Inc         Recruitment Consulting         32,500           Yipit, LLC         Research and Data Services         10,000           Total Investment Counsel         \$ 10,099,210           Securities Lending Agent Fees         \$ 706,762           Total Securities Lending Agent Fees         \$ 706,762		Investment Research Services		42,700
Wolfe Trahan Wolfe Trahan Wolfe Trahan Workerine Execution Services LLC Workerine Execution Services LLC Options Trading Platform 1,341 WorldBridge Partners Inc Yipit, LLC Research and Data Services Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees Total Securities Lending Agent Fees		Investment Research		9,500
Wolverine Execution Services LLC WorldBridge Partners Inc WorldBridge Partners Inc Yipit, LLC Research and Data Services Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees Total Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees Total Securities Lending Agent Fees		Transportation and Macro Economic Research		80,300
WorldBridge Partners Inc Yipit, LLC Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees  Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees  Securities Lending Agent Fees  \$ 706,762  \$ 706,762				1,341
Yipit, LLC Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees Total Securities Lending Agent Fees  8 706,762 706,762				32,500
Total Investment Counsel  Securities Lending Agent Fees BNY Mellon Asset Servicing Total Securities Lending Agent Fees Total Securities Lending Agent Fees  Securities Lending Agent Fees Total Securities Lending Agent Fees  \$ 706,762				
BNY Mellon Asset Servicing Total Securities Lending Agent Fees Securities Lending Agent Fees \$ 706,762 \$ 706,762			\$	10,099,210
Total Securities Lending Agent Fees \$ 706,762			•	700 700
Total Securities Lending Agent Pees		Securities Lending Agent Fees		
Total Overstocks Characo to Eurodo \$ 26.044.062	Total Securities Lending Agent Fees		Þ	100,702
	Total Quarterly Charges to Funds		\$	26,044,062

<sup>&</sup>lt;sup>1</sup>All costs reported are on an accrual basis except for internal operating costs, which are on a cash basis of accounting. Negative expense amounts are due to accrual adjustments and/or other miscellaneous adjustments.

### **Explanation of Expenses**

### Internal Operating Expenses

Internal operating expenses consist primarily of staff compensation and fringe benefits. SWIB employs a staff of professional investment and support staff to manage the trust fund assets. Other internal operating expenses consist of office equipment, supplies, business travel, information technology equipment and services, and general services.

### **Custodial & Banking Fees**

Wisconsin Certificate of Deposit Program: Under a contract with SWIB, Bankers' Bank administers the program under which the State Investment Fund (SIF) purchases certificates of deposit from Wisconsin-based banks and thrifts. Most administrative costs are paid by the participating banks. SWIB's expenses help underwrite other administrative costs, such as insurance that SWIB requires to be purchased.

BNY Mellon: Provides master custodial and administrative services (safekeeping of assets, income collection, valuations and accounting) for public and private domestic and foreign securities in the Wisconsin Retirement System (WRS), the SIF, and the other separately managed trust funds. In addition, SWIB receives performance measurement and analytical services through its contract with BNY Mellon, which serves as the official book of record for SWIB's accounting and performance measurement functions. BNY Mellon provides data and analytical tools used by SWIB for compliance and risk management. These include global collateral management, data management, and hosting services. Fees for these services are established by contract.

US Bank: The State of Wisconsin contracted with US Bank to be the state's working bank. The fees paid to US Bank by the SIF reflect bank service charges that are not directly applicable to the fund participants.

### Legal Fees, Services, and Expenses

Under authority delegated by the Attorney General, pursuant to s. 25.18 (1) (a) Statutes, SWIB may employ legal counsel for any matters arising out of the scope of its investment authority. This includes legal services relating to bankruptcies, class actions, private markets transactions, fiduciary advice, securities law, investment litigation, and other similar matters. The Attorney General annually reviews and approves a list of law firms to provide investment legal services for SWIB.

### **Investment Counsel**

Current law gives SWIB the authority to employ investment counsel in any matters arising out of the scope of its investment authority. Investment research and services provided include global market, industry, economic and company information, financial and performance analytics, news information, pricing and exchange data, credit ratings, financial modeling, economic forecasting, trading services, and a variety of Board consultations. These services enable SWIB to perform due diligence on current and future holdings and assist in monitoring investments.

### Securities Lending Agent Fees

Securities lending programs generally earn income through the reinvestment of cash collateral posted by borrowers and through the collection of fees for loans where non-cash collateral is posted. SWIB's securities lending income is shared with the agent to pay the costs associated with the administration of the program. The securities lending agent fees are no longer netted with income and are reported as securities lending agent fee expenses starting on July 1, 2019.

### **Externally Managed Separate Account Fees**

External asset managers have been delegated authority within guidelines established by SWIB to determine investment strategy and purchase securities in SWIB's name within a SWIB account. Fees are typically assessed as a percentage of the market value of assets under management and in some cases, fees are based on investment performance.

### **External Funds Fees**

SWIB invests in separate legal entities managed by external investment managers to gain exposure to select strategies including Public Markets, Private Equity, Venture Capital, Real Estate and Hedge Funds. In exchange for their investment management services, the external managers charge a fee within the entity they manage. Fees are typically assessed as a percentage of the market value of assets under management, commitments, and in some cases are based on investment performance. While the fees charged to these external vehicles do not meet the statutory definition of a cost or expense to SWIB, they are currently included in SWIB's total cost of management. Accordingly, these fees are reported as supplemental information.